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SDWRI Water News

South Dakota Water Resources Institute

Fall 2005

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SDWRI

South Dakota State University, College of Agricultural and Biological Sciences

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USGS104b Request for Proposals

South Dakota State University Water Resources Institute is making plans for FY2005 regarding the State Water Resources Institute Program (SWRIP). The Department of the Interior has not yet done the official "apportionment" of the funds; therefore, there has not yet been a final determination of the amount to be awarded to each institute under its base grant. We will be proceeding with the assumption that funding will remain at the same level as last year. Last year, the Water Resources Institute funded five research projects at SDSU totaling approximately \$70,000. We will proceed at this time with the assumption that we will again fund research for an approximate total of \$70,000 for 3-5 projects. That dollar amount is subject to change, depending on what happens at the Congressional level. Faculty employed at all state-owned universities and colleges are eligible to apply for these grant funds.

The tentative deadline for pre-proposal submission to SD WRI is **October 21, 2005**. Pre-proposals will be reviewed and those selected for submission to USGS for funding will be notified no later than **November 23**, although if no Congressional action has been taken, this date will be pushed back. Full proposals will be due at **SD WRI no later than December 23, 2005**. We are anticipating a start date for these one-year research projects of **March 1, 2006**.

Please click [here](http://wri.sdstate.edu/ProposalFormats.htm) (<http://wri.sdstate.edu/ProposalFormats.htm>) for the links to the criteria by which pre-proposals will be reviewed, and the required formats for pre-proposals and budgets. Please use these formats when submitting your pre-proposal. Keep in mind that the 104 Grant program **REQUIRES a TWO TO ONE Match (two non-federal dollars per federal dollar awarded)**. Indirect costs are not allowed on the federal side, but may be used as match. Please keep your pre-proposals to a two-page maximum, not including budget sheet and budget justification. Please e-mail your pre-proposals to sdsu.wri@sdstate.edu in a Word or WordPerfect format.

Please feel free to forward this announcement to any parties who may be interested in applying for these grant funds who may not have access to this announcement.

Youth Education

By Ross Vander Vorste, SDSU

Photos courtesy of Jerry Mills, Brown County



In late June Dave German and I traveled north to Aberdeen Sportfishing Day held at the Brown County Fairgrounds.

The event started bright and early and lasted until noon. Sportfishing Day showcased exhibits on angling skills, tackle crafting, fish cleaning, fishing ethics

and aquatic ecology.

Before the event we collected scuds, mayflies, caddisflies, crayfish and other aquatic "critters" for the 60 or so kids to get their hands on. The 8-16 year olds sorted through several tanks, finding various species of aquatics.

After identifying what they found the kids were then able to decipher the health of the water body in which the species were collected. Microscopes were set up for the kids to look at algae, zooplankton and smaller invertebrates.

I was very impressed to see such enthusiasm and willingness to dive in and collect things. They were not afraid to get dirty looking for the elusive invertebrates either.

Some of the children were repeat visitors from previous years and claimed this was their favorite exhibit. They all cooperated very well making my job easier and a lot of fun.

The event was topped off with hotdogs, great prizes and a fishing tournament at a nearby lake.





Youth Education continued



Students enjoy NPS Pollution model

By Ross Vander Vorste, SDSU

In May I was given the opportunity to demonstrate a Non-point Source Pollution model at the Big Sioux Water Festival. The model displayed a topographical layout of a typical landscape found in the Midwest. It included farms, houses, factories and even a golf course. Fertilizers, pesticides and sludge were represented by cool-aid and chocolate syrup. Once the contaminants were applied to the landscape a rainfall event was simulated using a spray bottle. Runoff from the event could be seen flowing down creeks and roads polluting a once pristine lake located at the bottom of the model. Kids enjoyed seeing the different colors of cool-aid run into the lake and they began to understand that lakes can be affected by things done miles away.

Ross demonstrates the Non-Point Source model for 4th grade students at the Big Sioux Water Festival in Brookings, SD.

South Dakota Water Concerns

Missouri Reservoirs Add Water (7/17/05)

<http://www.aberdeennews.com/mld/aberdeennews/news/local/12154479.htm>

Water Management Monthly News Release (7/7/05)

<https://www.nwd.usace.army.mil/pa/news-rls/releases/RCC070805.pdf>

Ranchers to get drought aid for livestock water (7/14/05)

<http://www.rapidcityjournal.com/articles/2005/07/14/news/local/news09.txt>

Corps gets OK to build water-intake system (8/13/05)

<http://www.rapidcityjournal.com/articles/2005/08/14/news/local/news08.txt>

Mo. governor wants more water released (8/13/05)

<http://www.rapidcityjournal.com/articles/2005/08/14/news/state/top/state01.txt>

Conservation groups lose appeal of Missouri River ruling (8/16/05)

<http://www.rapidcityjournal.com/articles/2005/08/16/pmedition/news/news02.txt>

Reservoir levels hold steady (8/21/05)

<http://www.rapidcityjournal.com/articles/2005/08/22/news/state/state03.txt>



Upcoming Meetings

SD Department of Environment and Natural Resources (SD DENR)

9/22-23/05: Board of Water and Natural Resources

Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol Avenue, Pierre, SD. For more information, contact Elayne Lande, DENR, at 773-4216

10/5-6/05: Water Management Board Meeting

Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol Ave, Pierre SD. For more information, contact Eric Gronlund, DENR, at 773-3352

10/19-20/05: Board of Minerals and Environment Meeting

Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol Avenue, Pierre. For more information, contact Jenny Hegg, DENR, at 773-3153

10/28/05: South Dakota State Emergency Response Commission Meeting

via the Digital Dakota Network. For more information, contact Lee Ann Smith, DENR, at 773-3296

Contact Information:

SD DENR, Joe Foss Building, 523 East Capitol, Pierre, SD 57501

Phone: 605-773-3151

Web: <http://www.state.sd.us/denr/denr.html>

Missouri River Basin Association (MRBA)

9/21-22/05: MRBA Director's Meeting

Bismarck, ND

Contact Information:

MRBA Phone: 1-605-343-6054

P.O. Box 2890 Email: mnisose@qwest.net

Rapid City, SD 57709-2890

Web: <http://www.mrba-missouri-river.com/>

SD DENR 319 Funding Announcements

319 Nonpoint Source Pollution (NPS) Project Grant Applications

SD Department of Environment and Natural Resources (SD DENR) is accepting applications for Clean Water Act Section 319 grants. The 319 grant funds may be used for watershed implementation and assessment/planning, ground water, and information and education projects that control or prevent NPS pollution. Project applications in both paper and electronic format plus letters of commitment from project partners who are contributing cash, in-kind funds or technical assistance for the project must be submitted to DENR on or before **October 3, 2005**. Send copies to:

Dr. Dennis C. Clarke

South Dakota Department of Environment and Natural Resources

Joe Foss Building

523 East Capitol

Pierre, South Dakota 57501-3182

Dennis.Clarke@state.sd.us

Application guidelines may be obtained by visiting:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/319.htm>

The applications will be considered by the South Dakota Nonpoint Source Task Force November 8, 2005. The Task Force's recommendations will be considered by the DENR Board of Water and Natural Resources at the Board's January 5, 2006 meeting.

For more information or assistance preparing project proposals, contact Dr. Dennis C. Clarke at (605) 773-4254.

Information and Education Targeted Activities

The South Dakota Discovery and Aquarium announces that funding for specific outreach activities addressing non-point source pollution and watershed ecology is now available. Water Festivals, teacher/facilitator workshops (must use standards compliant water education curriculums) and adult outreach are the only allowable activities under this grant.

For application guidelines, visit:

<http://www.sd-discovery.com/DCPages/Watershed.html>

or contact:

Anne Lewis • 805 W Sioux Ave • Pierre, SD 57501

605-224-8295 • 605-224-2865 (fax)

annelewis@sd-discovery.com



An Experience in Cambodia

By Darrell W. DeBoer, Professor Emeritus

South Dakota State University Agricultural and Biosystems Engineering

As a member of an Engineering Ministries International team, an engineering and architectural volunteer organi-



How does a child using a percolation test hole for play affect test results (such information is not found in text books)!

zation, I had the opportunity to visit Cambodia in February 2005. Cambodia is a third world country where many people only earn one dollar per day and was a victim of a rogue Pol Pot regime where most of its educated citizens were tortured and/or killed about 30 years ago. Our team of six accepted the responsibility of assessing the possi-



Is there a limit to the number of people who can ride on a 100 cc motorcycle?

bility of using an abandoned US military apartment building near Phnom Phen, the capitol, for conversion to a hospital.

My responsibilities were to perform soil percolation tests on hospital property soils and to design a septic system waste disposal system for the hospital.

In addition, we reviewed water supply options including polluted ground water being used by those in adjoining



Angkor Wat is one of the "Seven Wonders of the World." The visit was very interesting.

neighborhoods and a distant city water supply line. Hospital water demand would increase the city demand by about one-third which indicates the limited infrastructure available in the city. We also did our best to derive a cost estimate for the building conversion project and decided that it is about as costly to convert the structure to a hospital use as to move to a new location and start from bare land where the new facilities would be more culturally acceptable to the Cambodians.

One day was spent doing the tourist thing by visiting the famous 10th century Angkor Wat temple ruins. The temples were originally constructed by Hindu believers from India but today are the domain of Buddhist faithful.



Measuring water level changes during a percolation test.



Future Features

If you have a project that you think *Water News* readers would be interested in, please contact Jennifer Pickard at Jennifer.Pickard@sdstate.edu or via the link on SD WRI's web site at <http://wri.sdstate.edu>.

Your suggestions and comments are welcome!

Water News

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Congratulations!



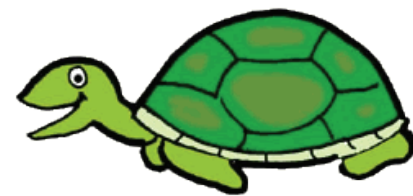
Angela Guidry

WRI would like to congratulate Ph. D. candidate Angela Guidry on her recent employment at East Dakota Water Development District.

She has been hired to oversee the Central Big Sioux River Imple-

mentation Project. Angela is working towards completion of a doctoral dissertation at South Dakota State University where she has been studying the fate and transport of phosphorus in soils.

Her dissertation project, "*Evaluation of Phosphorus Loss of Dominate Agricultural Soils in Eastern South Dakota Using Rainfall Simulations and Laboratory Studies*" was supported in part through the United States Geological Survey (USGS) 104b grant program.



"Sometimes we forget
that the water cycle and
the life cycle are one."
-Jacques Cousteau